

What is claimed is:

Claim 1. A plant comprising a recombinant nucleotide sequence encoding an amino acid sequence which, when administered to a fish, results in an antigenic or immunogenic response in said fish.

Claim 2. A seed of the plant of claim 1.

Claim 3. Plant cells of the plant of claim 1.

Claim 4. The plant of claim 1 wherein the amino acid sequence is an antigen of an organism that causes disease or pathology in a fish.

Claim 5. The plant of claim 1 wherein the nucleotide sequence is selected from the group consisting of SEQ ID NOs: 5, 6, 7, and 8.

Claim 6. A composition for administration to a fish, comprising plant material comprising a nucleotide sequence encoding an amino acid sequence which, when administered to a fish, results in an antigenic or immunogenic response in said fish.

Claim 7. The composition of claim 6 wherein the plant material comprises seed tissue.

Claim 8. The composition of claim 6 wherein the plant material is combined with at least one nutrient or excipient.

Claim 9. The composition of claim 6 wherein the amino acid sequence is an antigen of an organism that causes disease or pathology in fish.

Claim 10. The composition of Claim 9 wherein the nucleotide sequence is selected from the group consisting of SEQ ID NOs: 5, 6, 7, and 8.

Claim 11. A method of producing a composition for administration to a fish, comprising transforming a plant with a nucleotide sequence encoding an amino acid sequence which, when administered to a fish, results in an antigenic or immunogenic response in said fish.

Claim 12. The method of claim 11 wherein the amino acid sequence an antigen of an organism that causes disease or pathology in fish

Claim 13. The method of claim 11 wherein the amino acid sequence is extracted from the plant.

Claim 14. The method of claim 11 wherein the transgenic plant is crossed with at least one plant to produce progeny comprising the antigenic or immunogenic amino acid sequence.

Claim 15. The method of claim 11 wherein the nucleotide sequence is selected from the group consisting of SEQ ID NOs: 5, 6, 7, and 8.

Claim 16. A method of producing a composition for administration to a fish comprising providing biomass from a plurality of plants, of which at least certain plants comprise a heterologous nucleotide sequence encoding an amino acid sequence which, when administered to a fish, results in an antigenic or immunogenic response in said fish, wherein the nucleotide sequence is operably linked to a promoter to effect expression of the protein by the certain plants.

Claim 17. The method of claim 16 wherein the amino acid sequence is an antigen of an organism that produces disease or pathology in fish.

Claim 18. The method of Claim 17 wherein the nucleotide sequence is selected from the group consisting of SEQ ID NOs: 5, 6, 7, and 8.

Claim 19. A method of inducing an immune response in fish comprising feeding fish a plant or plant material from a plant comprising a nucleotide sequence encoding an amino acid sequence which, when administered to a fish, results in an antigenic or immunogenic response in said fish.

Claim 20. The method of claim 19 wherein the amino acid sequence is from an antigen of an organism causing disease or pathology in fish.

Claim 21. The method of Claim 20 wherein the nucleotide sequence is selected from the group consisting of SEQ ID NOs: 5, 6, 7, and 8.

Claim 22. A method of treating a fish infected with an organism that produces disease or pathology in fish comprising administering to the fish the composition of Claim 19 wherein said composition contains an antigen from said organism.

Claim 23. The method of claim 22 wherein said composition contains a nucleotide sequence selected from the group consisting of SEQ ID NOs: 5, 6, 7, and 8.